Water Quality in the East Blackpool Watersheds

Complaint Investigation 980154

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The Investigation

Background

Residents in the East Blackpool area near Clearwater were concerned that forestry activities above their properties would affect their domestic water supply. The properties are on a bench of land above the North Thompson River. The East Blackpool area contains several small separate drainages, including Lone Creek, Modrall Creek, Rennie Creek, Bester Creek, McCarthy Creek, and Axel Creek. The area falls under the Kamloops Land Resource Management Plan (LRMP) that was approved by cabinet in 1995 and declared a higher level plan in 1996. The LRMP establishes this area as a "general resource management zone." [1]

Several watershed assessments were completed for the area, beginning in 1995. A committee was established that included Weyerhaeuser (the licensee), Ministry of Forests district staff, Ministry of Environment, Lands and Parks staff, and some residents of the East Blackpool area (the complainants). The committee developed guiding principles and recommendations for forestry activities in the area in 1996. In early 1997, the district manager and the licensee agreed to manage the area as if it were a community watershed although it was not designated as such under the *Forest Practices Code of British Columbia Act* and its related regulations (the Code).

Water resources receive greater protection in community watersheds because the Code imposes stricter requirements for forestry and range activities. Code measures to protect community watersheds are intended to prevent long-term change to background water quality, quantity, and timing of flow. Apart from participating in the public review and comment process for forest development plans, there are no additional opportunities for the public to review and comment on operational plans that fall within a community watershed; however, water licensees can be represented on watershed advisory committees to review watershed assessments.

In 1997, the complainants applied to the Ministry of Environment, Lands and Parks for community watershed status for McCarthy and Axel Creeks. The ministry is still considering the application.

Despite the commitment from the district manager and the licensee to manage the area as if it were a community watershed, the complainants believed that forest development plans were not consistent with managing the area as a community watershed. A complaint was filed with the Forest Practices Board in 1998. Several of the complaint issues applied primarily to Cutting

1 A general resource management zone is defined in the Kamloops LRMP as an area where a basic set of objectives and strategies, that guide management of land, water, ecosystems and resources, is applied.

Permit 129 (CP 129), the most recent proposal in the forest development plan. Twelve cutblocks were proposed in the Axel Creek area. The complainants made numerous assertions:

- The equivalent clear-cut area (ECA)[2] was too large for a community watershed.
- Logging was planned on steep slopes and highly erodable soils.
- There was inadequate notice for review and comment.
- Cutblocks extended to the edge of fish-bearing streams.
- An access road for CP 129 was proposed to go through a rare ecosystem.
- Adjacency rules[3] were being violated.
- Cutblocks exceeded the maximum 40-hectare size specified in the Code.
- Code standards for road maintenance were not being met.

The road maintenance issue related to improper road surfacing. During a field trip attended by Board staff and participants in the complaint at the start of the investigation, that issue was addressed to the complainants' satisfaction.

Harvesting of CP 129 has begun and will continue through the 2000/2001 winter.

Investigation Findings

Legal requirements

In 1997, the district manager agreed to manage the East Blackpool area as if it were a community watershed. That commitment did not, in itself, create a legal obligation under the *Forest Practices Code of British Columbia Act* (the Act). However, the licensee incorporated the commitment into its forest development plan, which was approved by the district manager. Because section 67 of the Act requires persons carrying out forest practices to do so in accordance with any operational plans (including forest development plans), the licensee was legally required to conduct its operations in the East Blackpool area according to Code provisions for a community watershed.

Finding #1

The licensee was legally required to operate as though the East Blackpool area was a community watershed because that commitment was in the approved forest development plan.

2 The equivalent clearcut area (EAC) is the area that has been clearcut within a watershed, with a reduction factor to account for the hydrological recovery due to forest regeneration.

3 Adjacency rules govern the timing of harvesting in areas adjacent to existing, previously harvested cutblocks.

Equivalent clearcut area too large

The complainants asserted that harvesting plans would increase the ECA for some drainages beyond what is permitted for community watersheds. The complainants observed springtime flooding and muddy water on some properties and attributed these occurrences to clearcut logging above those properties.

The Code sets no limits on the size of the ECA. However, the Code does require that a watershed assessment be completed in community watersheds. Such assessments include an evaluation of the ECA and an analysis of potential hazards. The *Community Watershed Guidebook* recommends that the ECA remain below 30 percent of the area of the watershed. The results of a watershed assessment override the guidebook recommendations.

> The *Interior Watershed Assessment Guidebook* provides a methodology for assessing current condition of watersheds and the *Community Watershed Guidebook* provides recommended limits for the ECA within community watersheds. For drainages that have not had a separate watershed assessment completed, the *Community Watershed Guidebook* recommends that the ECA should not exceed 30 percent of the area of the watershed.

Four watershed assessments were completed in the area between 1995 and 1998. Two further hydrological assessments were completed in 1998 and 1999.[4] The 1998 assessment determined that, with the proposed harvesting, the ECA levels would remain below 30 percent on all drainages except the Lone and Modrall Creek drainages. Proposed harvesting in these two drainages was predicted to bring the ECA levels to just over 30 percent, so those drainages were further assessed in the field by the licensee's consultant. The field assessment resulted in refinements to the watershed boundaries. The ECAs were determined to be lower than 30 percent and no significant hydrological concerns were identified. The Board reviewed the assessments and accepts the assessment results.

Finding #2

Assessments determined that, with the proposed harvesting, the ECA levels in all drainages would remain within the level recommended for community watersheds.

Cutblocks proposed on unstable terrain

The complainants asserted that the licensee was locating cutblocks on steep slopes and highly erodable soil. The Code requires assessment of terrain stability and soil erosion potential to avoid creating landslides and erosion into streams.

Section 12 of the *Operational Planning Regulation* requires that a terrain stability hazard map and soil erosion potential map be completed for community watersheds. Both were done for the East Blackpool area in 1998. The results confirmed that some cutblocks in CP 129 were proposed

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4 The 1998 report reviewed previous watershed assessments, updated the ECA levels and provided recommendations for proposed development. The 1999 assessment was a field assessment of the potential hydrological effects of CP 129.

on potentially unstable terrain. Section 16 of the *Operational Planning Regulation* requires a terrain stability field assessment to be done on such terrain. This assessment was completed in 1999. As a result of the assessment, one cutblock was deleted from the plan and another was deferred for further assessment. Other cutblocks were assessed to have a low likelihood of material entering a stream and a low to moderate probability of landslides. To reduce surface disturbance, cable-harvesting was proposed for the area with a moderate probability of landslides. The final proposed cutblocks are consistent with the requirements of the *Timber Harvesting Practices Regulation.*

For areas that drain onto terrain that is potentially unstable or has a high surface erosion hazard, the *Community Watershed Guidebook* recommends that the ECA should be no more than 20 percent to avoid landslides. Three cutblocks proposed above potentially unstable terrain exceed the 20 percent ECA recommendation. However, 20 percent is a guideline, not a limit. In this case, those cutblocks, and potentially unstable terrain adjacent to them, were assessed in the field. No on-site concerns were identified.

Overall, the Board finds the assessments of cutblocks on potentially unstable terrain meet the requirements of the Code, and the results indicate that the cutblocks could be developed without creating a significant hazard of landslides or erosion of material into streams.

Finding #3

Cutblocks were proposed on potentially unstable terrain. The assessments of those cutblocks met the requirements of the Code. One cutblock was deleted and another was deferred for further assessment. Assessment results indicated that the proposed development of the remaining cutblocks would not create a significant hazard of landslides or erosion of material into streams.

Opportunities for review and comment

The complainants asserted that there was inadequate notice for the opportunity to review and comment on the 1998 forest development plan.

The *Operational Planning Regulation* requires a public review period of 60 days before a forest development plan is submitted for approval. The review period is the same for areas within a community watershed. The 1998 forest development plan was advertised and made available for the required 60-day review period. East Blackpool residents are usually provided additional opportunities to review operational plans at organized meetings. However, a separate meeting for the East Blackpool residents was not held during the review period for the 1998 forest development plan. Each year, the residents also have an opportunity to go on a field trip with the licensee. In the past some residents missed these meetings because of poor communication. Now, a standard date for the annual meeting and field trip has been set and a mailing list has been developed.

In the circumstances, the Board finds that the complainants' opportunity to review and comment on the forest development plans has been adequate.

Finding #4

The opportunity for review and comment for the 1998 forest development plan met Code requirements. Although there was no additional notification and opportunity to review the 1998 plan, the East Blackpool residents have been receiving additional opportunities to review plans, and a meeting to be held during the review and comment period has now been scheduled on an annual basis. In the circumstances, the Board finds that the complainants' opportunity to review and comment on the forest development plans has been adequate.

Access road to CP 129

The complainants were concerned that the access road planned for CP 129 was located in a stand of deciduous trees that formed a rare ecosystem and was, therefore, important for biodiversity conservation and wildlife habitat. The complainants also asserted that alternative routes would require crossing one less stream. A Ministry of Environment, Lands and Parks biologist and Ministry of Forests ecologists examined the deciduous stand. They concluded that it was not a rare ecosystem and that the proposed road development did not greatly conflict with their determination of the level of wildlife use. The Board reviewed the assessments and accepts the results.

The Board reviewed the proposed road location and alternative locations that would provide access to CP 129 and did not find a more suitable road location.

Finding #5

The planned location for the access road for CP 129 did not traverse a rare ecosystem and a more suitable alternative road location was not found.

Harvesting to stream edge

The complainants asserted that the cutblocks planned for CP 129 would reach the edges of streams and affect water quality.

The Code requires that all streams in a community watershed be managed as fish-bearing streams, regardless of the actual presence of fish. That means that a reserve zone, or "buffer" is required on all streams except the smallest (S4 streams).[5] Axel Creek is designated an S3 stream and required a reserve. The remaining streams are smaller (S4) and did not require a reserve. The cutblocks adjacent to Axel Creek had a 20-metre reserve as required. The streams in other cutblocks were classified as S4 requiring no reserve. The proposed riparian management practices complied with the Code.

5 The Code classifies fish-bearing streams by size, S4 being the smallest (less than 1.5 metres wide) and S3 streams being 1.5 to 5 metres wide.

Finding #6

All cutblocks in CP 129 complied with the Code riparian management practices for community watersheds.

Green-up/adjacency

The complainants asserted that cutblocks in Axel Creek violated the green-up[6] and adjacency rules in the Code.

At the date that the forest development plan was submitted for approval, the *Operational Planning Regulation* adjacency rules required that harvesting could only be proposed if a contiguous area would be greened-up at the time of proposed harvesting. This planning requirement was later removed from the *Operational Planning Regulation* and a practice requirement was added as section 9 of the *Timber Harvesting Practices Regulation.* It states that a person may only harvest a cutblock if adjacent, previously-harvested cutblocks have greened-up. Section 9 also permits harvesting adjacent to a non-greened-up cutblock if the combined size of the cutblocks does not exceed 40 hectares.

Axel Creek cutblocks were planned adjacent to two existing cutblocks. One of those cutblocks had reached the required 3-metre green-up. The other had not, but the combined opening with the new cutblock would be less than 40 hectares, so green-up of the adjacent area was not required.

Finding #7

The proposal for the cutblocks in CP 129 complied with the green-up and adjacency requirements of the Code.

Cutblock size

The complainants asserted that cutblocks in the East Blackpool area exceeded the maximum cutblock size allowed under the Code. Section 11 of the *Operational Planning Regulation* establishes a maximum cutblock size of 40 hectares for this area. None of the cutblocks in CP129 exceed the 40-hectare Code maximum for the area.

The *Community Watershed Guidebook* recommends that cutblocks in a community watershed should average less than 20 hectares, with a maximum individual cutblock size of 40 hectares. The cutblocks for CP 129 were consistent with this recommendation.

However, for the Engelmann Spruce-Subalpine Fir (ESSF) biogeoclimatic zone,[7] the *Community Watershed Guidebook* recommends that cutblock size should average less than 10 hectares with a

6 The basic Code requirement is that trees in a cutblock must have reached three metres in height before the cutblock is considered greened-up.

maximum of 20 hectares. Three cutblocks are located in the ESSF zone and range from 13.3 to 33.8 hectares in size, exceeding the guidebook recommendation. An expert involved in the guidebook development advised the Board that the objective of the recommendation on cutblock size is to assist planners to achieve the recommended ECA levels. The primary concern is the impact of the amount of harvesting on hydrological processes in the drainage. The 1999 hydrological assessment determined that, with the development of CP 129, the ECA for the Axel Creek drainage (24 percent) would remain below the 30 percent level recommended by the guidebook. The Board accepts that the cutblocks met the objective of the guidebook.

Finding #8

The cutblocks in CP 129 complied with the 40-hectare maximum cutblock size required by the Code and met the objective of the *Community Watershed Guidebook* recommendations.

Commentary

The planning in the East Blackpool area complied with Code requirements for community watersheds and in some cases has exceeded Code requirements. However, some residents remain concerned about their water supply. Water samples were taken on four streams between June and August 1999. All samples were found to meet Health Canada's safe drinking water standards. Water sampling continued again between April and September 2000. All samples but one met the safe drinking water standards. One sample on Axel Creek was taken shortly after a bridge was installed and did not meet the safe drinking water standards. Subsequent samples taken were within the safe drinking water standards. The licensee has advised that water sampling will continue for at least two years following completion of harvesting under CP 129.

There have been communication problems among the participants relating to scheduling meetings, and some residents were not aware of all the field assessment work that had been completed. These communication problems may have contributed to the issues raised in the complaint. The forest district has taken steps to improve notification procedures, and has proposed a revised reporting procedure for watershed assessments that should improve communication on work that has been completed.

Conclusions

1. The equivalent clearcut levels in the East Blackpool area were consistent with recommendations in the *Community Watershed Guidebook*.

2. Assessments for cutblocks that were proposed on potentially unstable terrain complied with Code requirements. The results indicated that in most of the cutblocks the proposed

7 Engelmann Spruce-Subalpine Fir (ESSF) is the uppermost forested zone in the southern interior.

development would not create a significant hazard for landslides or erosion of material into streams. One cutblock was deleted and another was deferred for further assessment.

3. The opportunity for review and comment for the 1998 forest development plan met Code requirements. Although there was no additional notification and opportunity to review the 1998 plan, the East Blackpool residents have been receiving additional opportunities to review plans, and a meeting to be held during the review and comment period has now been scheduled on an annual basis. In the circumstances, the Board finds that the complainants' opportunity to review and comment on the forest development plans has been adequate.

4. The access road for Cutting Permit 129 did not traverse a rare ecosystem and a more suitable alternative road location was not found.

5. The cutblocks for Cutting Permit 129 located adjacent to streams complied with the riparian management practices required for community watersheds.

6. The cutblocks for Cutting Permit 129 complied with the Code green-up and adjacency requirements.

7. The cutblocks for Cutting Permit 129 complied with Code requirements for maximum cutblock size and met the objective of the Community Watershed Guidebook recommendations.

8. Forest management proposed for Cutting Permit 129 within the East Blackpool area is consistent with management practices outlined in the Code for community watersheds.

Concluding remarks

Where forest development planning has a direct effect on the public, as with issues of domestic water supply, the Board endorses efforts to involve those who may be affected that go beyond the minimum Code requirements. Extra efforts at communication should facilitate understanding among all participants and provide an avenue to resolve controversial issues. For example, the district is considering developing a contingency plan with the residents to deal with any water problems that may arise in the future. The regional hydrologist is also assisting with the development of a watershed assessment report designed specifically for the East Blackpool area. The Board encourages the district, region, and the licensee to continue their communication efforts with the public.

Location of Blackpool Complaint